

REMARKS

The patent examiner in charge of the present application, Mr. Thanh X. Luu, is thanked for the courtesies extended during a lengthy telephone interview with the undersigned attorney for Applicant on Monday, April 12, 2004. During the telephone interview, the differences between the present invention and the Saaski, et al., U.S. Patent No. 5,606,170 were discussed. The Examiner maintained that the claims, as presently written, do not define over the Saaski reference although, the invention as shown, did appear to have patentable differences. It was suggested that the claims be rewritten to more clearly point out these differences. Due to the fact that a foreign applicant was involved, the undersigned attorney of record indicated that it would be necessary to communicate with the foreign applicant, discuss the results of the telephone interview, and obtain permission to rewrite the claims to define more clearly over Saaski.

This permission has now been obtained, and the present Amendment now contains amended and newly presented claims for the Examiner's consideration. Claims 23-44 are currently pending in the Application. The Applicant has amended Claims 23, 27, 28, 32, 38 and 40. The Applicant has presented new Claims 45-66 directed to an alternate embodiment of the invention. For ease of examination, it is pointed-out that Claims 46-66 are identical to Claims 24-44 with differing dependencies. They are all dependent claims and therefore, if Claim 45 is found allowable, all of Claims 46-66 will be allowable.

In a further telephone interview on June 2, 2004, Examiner Luu indicated that he thought the claims were acceptable over the art cited to date, but would need to update his search.

### **DRAWING OBJECTIONS**

The drawings have been objected to because the word “figure” is misspelled in most of the drawings. The Examiner has required a proposed drawing correction or corrected drawings in reply to the Office Action to avoid abandonment of this Application. Applicant attaches herewith copies of the drawings with the proposed correction to spell the word “figure” correctly.

### **CLAIM REJECTIONS – 35 USC 112**

The Examiner has rejected Claim 28 as being indefinite for failing to particularly point out and distinctly claim the subject matter, which Applicant regards is the invention. The Examiner further states “regarding Claim 28, it is unclear in its given context what “wherein at least one second of the second optical conductors is arranged in an inner ring” means”. Claim 28 has been amended to remove the first occurrence of the word “second”, which it is believed to cause the indefiniteness. It is believed that this rejection has been overcome by the Amendment.

### **CLAIM REJECTIONS – 35 USC, SECTION 103**

The Examiner has rejected Claims 23-28, 31-33 and 43 as being obvious in view of “Saaski, et al., U.S. Patent No. 5,606,170. The Examiner specifically says that regarding Claims 24 and 25, Saaski, et al. does not “specifically disclose the structure of the measuring head. However, the specific structure of the measuring head or housing is a matter of design choice. It would have been obvious to a person of ordinary skill in the art at the time the invention was

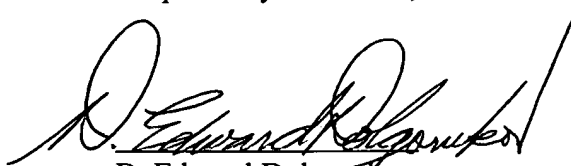
made to make the measuring head or housing of the device of Saaski, et al. flexible or partially bent in order to more easily maneuver the device upon use or to make the device fit more easily into certain spaces.”

Claim 23 has been amended to more clearly define over Saaski, which uses a fundamentally different method. The sensor system disclosed by Saaski is using a sensing fiber 20 with an annular layer of fluorophore, as stated at column 14, lines 5-9. The excitation of fluorescence inside of an evanescent field takes place with respect to exciting light which is reflected under total internal reflection conditions at the annular surface of the sensing fiber 20. The numerical apparatuses of optical conductors or fibers for exciting and detecting light are not important for the fluorescence excitation method according to Saaski. Saaski describes a completely different measuring principle.

In contrast, the present invention concerns a planar layer, which is illuminated directly. The exciting light passes through the end faces of optical fibers and is directed directly onto the planar layer, which contains a fluorescing material, and is not formed of a fluorophore like in Saaski. Claim 23, as amended, clearly spells out that there is at least one first optical conductor, which directs the light to at least one light source directly into or in the direction of the at least one planar layer of material, and that the planar layer of material has a planar fluorescing layer containing a fluorescing material. These elements are simply not present in Saaski because Saaski practices a completely different method and therefore, the allowance of Claim 23 and the claims depending thereon is courteously requested.

Newly presented Claim 45 and the claims dependent thereon, i.e. 46-66, claim an alternate embodiment of the invention not previously claimed, but completely disclosed in the present application. Please note that the last portions of element g) of Claims 23 and 45 are substantially the only differences in the claims. Claim 45 is speaking to the embodiment “wherein the at least one first optical conductor and the at least second optical conductor are arranged in row arrangements opposite one another in pairs, the rows being aligned parallel to a longitudinal axis of the measuring head”. This embodiment of the invention is fully supported in the specification and drawings, and the allowance of Claims 45-66 is courtesly solicited. As per the undersigned attorney’s agreement with the Examiner, during a further telephone interview on Thursday, May 6, 2004, the undersigned attorney will call the Examiner in charge within the next couple of days to have a further telephone interview.

Respectfully submitted,



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